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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/678,012

10/02/2003

Tony Gioutsos

60,256-069

9245

7590

04/11/2005

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EXAMINER

GOINS, DAVETTA WOODS


ART UNIT

PAPER NUMBER

2632

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/678,012	<b>Applicant(s)</b> GIOUTSOS ET AL.	
	<b>Examiner</b> Davetta W. Goins	<b>Art Unit</b> 2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/2/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gioutsos (US Pat. 5,739,757) in view of Kwun (US Pat. 6,134,947).

In reference to claims 1, 14, 20, Gioutsos discloses a) the claimed at least one ferromagnetic element the at least one ferromagnetic element responsive to the weight, which is met by ferromagnetic element 40 (col. 3, lines 1-17), and b) the claimed first sensor comprising a magnet generating a magnetic field and an inductor, the magnet and inductor mounted adjacent the ferromagnetic element, the magnetic field altered by the strain in the ferromagnetic element, the inductor generating a signal based upon the alteration in the magnetic field, which is met by the ferromagnetic element 40 lying within the magnetic field of magnet 48; sensors 44, 46, each sensor including a coil 50 (inductor) (col. 3, lines 29-40). Gioutsos does not specifically disclose the claimed mechanically coupled between the setting surface and a vehicle floor such that strain is induced in the ferromagnetic element. Kwun discloses a weight sensing device, made of ferromagnetic material, placed under a seat leg around a fastening bolt and is clamped between the bolt and the floor of the automobile (col. 5, lines 15-44; col. 6, lines 1-20). Since Gioutsos discloses a ferromagnetic element used to detect the weight upon the seat within a vehicle, it

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would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of placing the ferromagnetic element between the seat and the floor, as disclosed by Kwun, with the system of Gioutsos, such that there will be short-term changes in stress that are measured rather than long-term variations in the clamping force.

In reference to claims 2, 15, Gioutsos discloses the claimed plurality of ferromagnetic elements, which together receive all of the weight on the seating surface, which is met by ferromagnetic elements 40 (col. 4, lines 35-47).

In reference to claims 3-5, 16, although Gioutsos does not disclose the claimed seating surface is on a seat and the at least one ferromagnetic element is coupled between a vehicle floor and a bracket on the seat, he does disclose a ferromagnetic element 40 located within the cushion 38 of the vehicle seat 24 for detecting the stress of the person sitting on the seat (col. 3, lines 14-17).

Kwun discloses a weight-sensing device, made of ferromagnetic material, placed under a seat leg around a fastening bolt and is clamped between the bolt and the floor of the automobile (col. 5, lines 15-44; col. 6, lines 1-20). Since Gioutsos discloses a ferromagnetic element used to detect the weight upon the seat within a vehicle, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of placing the ferromagnetic element between the seat and the floor, as disclosed by Kwun, with the system of Gioutsos, such that there will be short-term changes in stress that are measured rather than long-term variations in the clamping force.

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In reference to claim 6, Gioutsos discloses the claimed ferromagnetic element receives all of the weight on the seating surface, which is met by the ferromagnetic element 40 used with part of sensor 44, 46 used to measure the weight of the passenger on the seating surface 36 (col. 4, lines 1-19).

In reference to claim 7, Gioutsos discloses the claimed magnet is an electromagnet and the inductor includes a coil, which is met by the magnet 48, which is preferably an electromagnet (col. 3, lines 28-35).

In reference to claim 8, Gioutsos discloses the claimed actuator for a vehicle safety device, the actuator actuating the vehicle safety device based upon the signal from the first sensor, which is met by the actuation of airbag 22 (col. 3, lines 7-13).

In reference to claim 17, Gioutsos discloses the claimed controller receiving information based upon the signals from the inductor in each of the sensors, which is met by microcontroller 30 (col. 3, lines 41-65).

In reference to claim 18, Gioutsos discloses the claimed controller determining a position of an occupant on the seating surface based upon the information, which is met by the microcontroller 30 can determine whether the passenger is seated on the forward portion of the seating surface based on the forward sensor 44 and rearward sensor 46 (col. 4, lines 1-19).

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In reference to claim 19, Gioutsos discloses the claimed controller determining the weight on the seating surface based upon the information, which is met by the microcontroller 30 determining the passenger's weight (col. 4, lines 1-19).

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gioutsos (757).

In reference to claim 10, although Gioutsos does not specifically disclose the claimed method of c) measuring strain in a second element; d) activating a second vehicle function based upon step c), he does disclose a vehicle seat 24 including a ferromagnetic element 40 for measuring the stress applied to the seat of cushion 38 (col. 3, lines 1-35), b) the claimed method of activating a first vehicle function based upon step a), which is met by the actuation of the airbag 22 is operated based upon the weight measured by sensors 44, 46 (col. 3, lines 65, 66; col. 4, lines 1-19). Since Gioutsos discloses the use of a weight sensor used to operate at least one air bag, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any number of sensors as well as any number of vehicle functions that will operate upon a second one of the sensors being strained in cases where there are several occupants within a vehicle who's weight should be monitored to operate different airbags.

4. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gioutsos (757) in view of O'Boyle et al. (US Pat. 5,905,210).

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In reference to claims 11-13, although Gioutsos does not disclose the claimed step a) is performed utilizing a magnetostrictive sensor, he does disclose the use of a ferromagnetic element 40 (col. 3, lines 7-35). O'Boyle discloses a seat weight mad of magnetostrictive material (col. 11, lines 18-32). Since both Gioutsos and O'Boyle include weight sensors for seats within a vehicle, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of using magnetostrictive mater, as disclosed by O'Boyle, with the system of Gioutsos so the sensor will provide an accurate measurement of weight over a wide temperature range and provide for a system that is inexpensive and capable of being subjected to very high compressive or tensile loads without causing damage as could occur if a load cell were used.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Gioutsos (757).

In reference to claim 9, Gioutsos discloses the claimed method for activating a switch including the steps of measuring strain in a first element, which is met by a vehicle seat 24 including a ferromagnetic element 40 for measuring the stress applied to the seat of cushion 38 (col. 3, lines 1-35), b) the claimed method of activating a first vehicle function based upon step a), which is

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met by the actuation of the airbag 22 is operated based upon the weight measured by sensors 44, 46 (col. 3, lines 65, 66; col. 4, lines 1-19).

7. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure as follows. Farrington (US Pat. 6,329,910 B1), disclosing an impact sensor.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davetta W. Goins whose telephone number is 571-272-2957. The examiner can normally be reached on Mon-Fri with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D.W.G.  
March 21, 2005

Davetta W. Goins  
Primary Examiner  
Art Unit 2632